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ABSTRACT

The purpose of this investigation was to ascertain whether the age specific expectations of Piaget's theory (1965) regarding the development of moral judgment in children from four to seven years of age were modifiable through use of a certain adaptation of Bandura and McDonald's imitative learning paradigm which had utilized adult models. In this study of pro-social learning of pre-school and first grade children, an adaptation of the social learning paradigm involved the introduction of a 20 minute film (1) using glove-type, hand manipulated puppets as models to act out Piaget-type stories, and (2) affording vicarious reinforcement from a six-year-old peer throughout the treatment in an effort to maximize the resultant acquisition of those moral judgments that involve the distinction between social acts of intentionality or accident. Studied were 80 children enrolled in six public and private schools from middle class socioeconomic backgrounds, in the area of Redlands-San Bernardino, California. Pretest results showed that there were no significant differences between the subjects across all age categories from four- to seven-years. The variable of age, for both the two-week delayed posttest, yielded no significant differences in average performance. It is concluded that the use of the film was a vehicle for promoting moral development and that the posttest results afforded a basis for questioning the age-specific expectations of Piaget's theory. [Not available in hard copy due to marginal legibility of original document.] (Author/LS)

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(A paper presented at the American Educational Research Association Convention, April 5, 1972, in Chicago)

THE MODIFICATION OF AGE-SPECIFIC EXPECTATIONS OF PIAGET'S THEORY OF DEVELOPMENT OF INTENTIONALITY IN MORAL JUDGMENTS OF FOUR- TO SEVEN-YEAR OLD CHILDREN IN RELATION TO USE OF PUPPETS IN A SOCIAL (IMITATIVE) LEARNING PARADIGM

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Abstract

Objectives

The underlying purpose of this investigation was to ascertain whether the age-specific expectations of Piaget's theory (1965) regarding the development of moral judgment in children from four to seven years of age--a theory which has been challenged by recent research studies (e.g., Bandura and McDonald, 1963; Bandura, 1969)--were modifiable through use of a certain adaptation of Bandura and McDonald's imitative learning paradigm which had utilized adult models. In this study of pro-social learning of pre-school and first-grade children, an adaptation of the social learning paradigm involved the introduction of a 20-minute film (1) using glove-type, hand-manipulated puppets as models to act out Piaget-type stories, which provided a natural plot or dramatization and (2) affording vicarious reinforcement (Bandura, 1965) from a six-year old peer throughout the treatment in an effort to maximize the resultant acquisition of those moral judgments that involve the distinction between social acts of intentionality or accident.

Questions to be Answered. In terms of both immediate and delayed generalizability of four to seven year old children's moral judgments, the objectives of the investigation were clarified in terms of the following questions:

1. Was there an age difference in the objectivity (focusing on immediate consequences of an accident irrespective of intent of the subject--an immature reaction) vs. subjectivity (intentionality or a purposeful act reflecting a mature moral choice) continuum of intentionality choices between children aged four to five years and six to seven years?
2. How effective would the treatment (a color and sound 16mm. film-mediated performance of a puppet which imitates the actions of the characters in Piaget-type stories of accidental-intentional themes and receives vicarious reinforcement from a six-year-old peer) be in producing change from objective to subjective judgments?
3. Would there be an interaction between treatment effects and age level?

Method and Technique

Subjects. The sample used in this study was composed of 80 children enrolled in six public and private schools (nursery, kindergarten, and grade one classes), located in the area of Redlands-San Bernardino, California. The subjects whose ages ranged from four- to seven-years came from homes covering all levels of middle class socio-economic status.

Instruments. Piaget-type stories, adapted by Crowley (1967, 1968) into picture-story booklets, were used in the four phases (pretesting, treatment with a film relating 10 sets of two stories reflecting intentional or accidental behavior, immediate posttest, and two-week delayed posttest) of the experiment. The stories included some previously used by Piaget (1965) and Bandura and McDonald (1963), but were rephrased and simplified by Crowley, in order to be more intelligible to first grade children.

Experimental Design and Statistical Analysis. A pre- and posttest 2 X 2 factorial experimental design (treatment vs. control and four-to-five vs. six-to-seven-year age level) involving random assigment of 10 subjects to each of four classifications was employed. As dependent variables, immediate posttests and delayed posttests were separately analyzed for statistical significance by two-way analysis of covariance with age and treatment as the main variables, and with pretest scores as covariates. Both planned and post hoc comparisons among individual pairs of means were made. The program used was the BMDX64--General Linear Hypothesis--prepared by Dixon (1969).

Findings

Pretest results showed that there were no significant differences between the subjects across all age categories from four- to seven-years. Therefore, all subjects started this experiment on an approximately equal basis.

The variable of age, for both the immediate and two-week delayed posttest, yielded no significant differences in average performance. The treatment variable exhibited differences in mean performance of the immediate posttest and the two-week delayed posttest which were significant, respectively, at the .01 and .05 levels. Following elimination of all questionable responses (a judgment made by 89 assistant examiners regarding the subject's genuine understanding of the story requirements of intention or lack of it) the treatment variable showed differences in mean performance of the immediate posttest as significant at the .001 level and the two-week delayed posttest at the .05 level of significance. There was no significant interaction effect associated with treatment and age in this experiment.

Conclusions

The results of this investigation were similar to other empirical studies (e.g., Bandura and McDonald, 1963; Crowley, 1968; Glassco, Milgram and Youniss, 1970; Jensen and Larm, 1970) in the moral domain. However, none of the other experiments was so limited in treatment time (twenty-minute film), nor did they include such a low age range in their studies.

Within the limited context of this investigation involving the distinction between social acts of intentionality or accident, it would appear that the use of the film was a vehicle for promoting moral development and that the posttest results afforded a basis for questioning the age-specific expectations of Piaget's theory.

Educational and Scientific Importance of the Study

The results of this investigation seem to provide an obvious extension to educational television. While the simulated television production provided the treatment for the experimental group, it could also be an example for relating educational and socialization objectives to television. As Bandura and Walters (1963) have indicated, today's children are replacing parents and other adult models with symbolic models. The prognosis is that the trend will increase in the future. Therefore, innovation along these lines would seem to be appropriate.

The social-learning paradigm of Bandura seems to have very real advantages as far as this study is concerned. The short duration of the treatment together with the extension downward to four-year-old subjects provides evidence of the theory's ability to adjust to reasonable demands for its verification.

TABLE 1

RACIAL AND ETHNIC DISTRIBUTIONS BY PERCENTAGES FOR (A) REDLANDS UNIFIED SCHOOL DISTRICT, 1969-1970 AND (B) SAMPLE EMPLOYED IN THIS INVESTIGATION, 1969-1970

Spanish Surname	Other White	Negro or Black	Oriental	Other	Total
A. Redlands Unified School District, 1969-1970					
18.2	78.3	2.6	0.4	0.5	100.0
B. Sample used in this investigation, 1969-1970					
16.0	79.0	2.5	2.5	---	100.0

TABLE 2

DESCRIPTIVE STATISTICS FOR SUBJECTS ELIMINATED BECAUSE OF INAPPROPRIATE PRETEST SCORES JUDGED TO BE INDICATIVE OF TOO HIGH A LEVEL OF MATURITY OR OF MISUNDERSTANDING OF TASK

		Sex		Pretest Score (eight items)	
Age in Years	N	M	F	Mean	S.D.
Four years	19	9	10	.89	1.32
Five years	21	8	13	1.57	2.38
Six years	29	13	16	4.27	2.68
Seven years	40	16	24	6.42	1.82

TABLE 3

DESCRIPTIVE STATISTICS OF CHARACTERISTICS OF THE RETAINED SUBJECTS JUDGED TO BE IMMATURE AND THUS APPROPRIATE FOR TASK EXPOSURE
(N = 80)

	Immediate Posttest Group						
	Number			Age in Months		Pretest Score (eight items)	
Group	Male	Fem.	Total	Mean	S.D.	Mean	S.D.
1. Experimental	5	5	10	59.83	6.70	1.30	.25
2. Experimental	5	5	10	82.24	7.82	1.20	.24
3. Control	6	4	10	57.84	8.25	1.60	.16
4. Control	6	4	10	82.69	8.07	1.00	.25

	Delayed Posttest Group (two weeks)						
	Number			Age in Months		Pretest Score (eight items)	
Group	Male	Fem.	Total	Mean	S.D.	Mean	S.D.
1. Experimental	6	4	10	60.37	7.46	1.10	.23
2. Experimental	6	4	10	81.05	6.60	1.40	.21
3. Control	6	4	10	58.75	6.84	1.00	.25
4. Control	4	6	10	81.40	7.55	1.10	.27

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TABLE 4

MEANS, STANDARD DEVIATIONS AND ADJUSTED MEANS FOR IMMEDIATE AND TWO-WEEK DELAYED POSTTESTS
(N = 80)

Immediate Posttest (twelve items)

Group	Age	N	Mean	S.D.	Adjusted Mean
1. Experimental	4-5	10	3.80	2.31	3.78
2. Experimental	6-7	10	6.20	3.99	6.24
3. Control	4-5	10	2.40	1.85	2.19
4. Control	6-7	10	2.10	2.16	2.27

Delayed Posttest (twelve items)
(two weeks)

Group	Age	N	Mean	S.D.	Adjusted Mean
1. Experimental	4-5	10	3.30	2.19	3.33
2. Experimental	6-7	10	5.30	4.60	5.14
3. Control	4-5	10	1.40	1.42	1.49
4. Control	6-7	10	2.60	2.05	2.63

TABLE 5

RESULTS OF ANALYSIS OF COVARIANCE FOR IMMEDIATE POSTTEST

Source	df	MS	F
Age	1	15.27	1.86
Group (Experimental vs. Control)	1	77.29	9.44**
Interaction (Age X Group)	1	13.75	1.68
Covariate	1	8.15	0.99
Error	35	8.18	

**p < .01.

TABLE 6

RESULTS OF ANALYSIS OF COVARIANCE FOR TWO-WEEK DELAYED POSTTEST

Source	df	MS	F
Age	1	21.36	2.55
Group (Experimental vs. Control)	1	46.45	5.56*
Interaction (Age X Group)	1	1.13	0.13
Covariate	1	8.70	1.04
Error	35	8.35	

*p < .05.

TABLE 7

RESULTS OF ANALYSIS OF COVARIANCE FOR IMMEDIATE POSTTEST WITH QUESTIONABLE ITEMS OMITTED

Source	df	MS	F
Age	1	28.28	3.64
Group (Experimental vs. Control)	1	102.78	13.23***
Interaction (Age X Group)	1	7.93	1.02
Covariate	1	1.12	0.14
Error	35	7.76	

***p < .001.

TABLE 8

RESULTS OF ANALYSIS OF COVARIANCE FOR TWO-WEEK DELAYED POSTTEST WITH QUESTIONABLE ITEMS OMITTED

Source	df	MS	F
Age	1	18.66	2.61
Group (Experimental vs. Control)	1	35.48	4.97*
Interaction (Age X Group)	1	3.70	0.51
Covariate	1	28.95	4.05
Error	35	7.13	

*p < .05.

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